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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,978	04/10/2001	Rainer Uhl	740105-70	7149

22204 7590 05/21/2003

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EXAMINER

FINEMAN, LEE A

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/828,978

Applicant(s)

UHL, RAINER

Examiner

Lee Fineman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on 25 February 2003 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s): _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to an amendment filed 25 February 2003 in paper number 10 in which claims 1-16 were cancelled and claims 17-30 were added. Claims 17-30 are pending.

Drawings

1. The proposed drawing correction filed on 25 February 2003 has been disapproved because it is not in the form of a pen-and-ink sketch showing changes in red ink or with the changes otherwise highlighted. See MPEP § 608.02(v).

The examiner is unaware of a memo amending the drawing practice to no longer require red marked drawings as set forth and invites the applicant to provide a copy of the memo. However, the MPEP still states changes made in the drawing itself must be filed showing such changes in red ink or with the changes otherwise highlighted.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 17-19, 21-22, 24, 26 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle, U.S. Patent No. 4,758,088 in view of Reich, U.S. Patent No. 4,640,589.

Regarding claim 17, Doyle discloses a microscope (fig. 3) comprising a light source (not shown but producing beam 78), an objective lens (34) positioned for focusing the light beam on the specimen (80) area for illumination and a reflector means (84) to reflect the light back through the illuminated area of the specimen. Doyle discloses the claimed invention except wherein the light source is adapted to allow a change between different wavelengths for producing, alternately, transmitted light illumination and epi-fluorescence illumination. Reich teaches a microscope illuminator (10) that is adapted to allow a change between different wavelengths for producing, alternately, transmitted light illumination and epi-fluorescence illumination (3 with 4, column 3, lines 53-68). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the visible light source of Doyle to become an illuminator capable of transmitted light illumination and epi-fluorescence illumination as suggested by Reich to provide a more flexible system with another mode for viewing sample characteristics.

Regarding claims 18-19, 21-22, 24, 26 and 30, Doyle further discloses a reflector means (84) comprising a body having a concave surface and is hemispherically-shaped with an aperture for allowing particles flung from the specimen by action of the light beam to be captured, which reflects essentially all of the illumination the light beam, which includes fluorescent light, and at least a portion of the concave surface is reflective to at least a portion of the illumination light to produce oblique illumination of the specimen (fig. 3) and a transparent holder (4) for supporting the specimen on a surface facing away from the objective lens (34)

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4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle in view of Reich as applied to claim 17 above and further in view of Allingham, U.S. Patent No. 3,497,377.

Doyle discloses the claimed reflector means except for an explicit written teaching that the body is transparent. Allingham teaches that a reflector means, or more commonly, a mirror is a surface having transparent characteristics with a backing of high reflectivity and opaqueness (column 1, lines 32-35). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the reflector of Doyle in view of so as to include a body of transparent material to protect the reflective surface of the reflector means from damage.

5. Claims 23, 25 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle in view of Reich as applied to claim 17 above and further in view of Lanni et al., U.S. Patent No. 5,801,881.

Regarding claims 23, 25, Doyle in view of Reich as applied to claim 17 above discloses the claimed invention except for use of an immersion fluid to optically couple the holder to the reflector means and to optically couple the objective lens to the specimen. Lanni et al. teach the use of an immersion fluid (not numbered) in figure 5 to optically couple a transparent holder (4) to the reflector means (16) and to optically couple the objective lens (8) to the specimen (2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Doyle in view of Reich to include immersion fluid to reduce losses and permit better image quality.

Regarding claims 27-28, Doyle in view of Reich as applied to claim 17 above further discloses a beam splitter (column 4, lines 10-11; Doyle) for reflecting light from the light source into the objective lens (34; Doyle) but is silent as to it being a dichroic beam splitter as well as being essentially impermeable to excitation light and essentially permeable with respect to fluorescent light. Lanni et al. teach in fig. 4, using dichroic beam splitter (26) which is essentially impermeable to excitation light and essentially permeable with respect to fluorescent light to be able to view and record only fluorescent images of the sample. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the beam splitter of Doyle in view of Reich a dichroic beam splitter to be able to view and record only fluorescent images of the sample.

6. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle in view of Reich as applied to claim 17 above and further in view of Pinkel et al., U.S. Patent No. 5,982,534

Doyle in view of Reich as applied to claim 17 above discloses the claimed invention except for at least a portion of said reflector mean including a nonreflecting surface for transmitting laser light being emitted from outside a boundary surface of the reflector means to a reflecting boundary surface to the surface of the specimen that reflects the laser light at an angle such that total reflection of the laser light occurs at the boundary surface to the surface of the specimen by which fluorescent excitation of the specimen occurs. Pinkel et al. teach a reflective means being a concave, hemispherically shaped body (fig. 2, 205, 207 and column 11, lines 1-13) and at least a portion of said reflector mean including a nonreflecting surface (123) for transmitting laser light (103, column 7, line 57) being emitted from outside a boundary surface of

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the reflector means to a reflecting boundary surface to the surface of the specimen that reflects the laser light at an angle such that total refraction of the laser light occurs at the boundary surface to the surface of the specimen by which fluorescent excitation of the specimen occurs (column 7, lines 22-30 and 49-51). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Doyle in view of Reich to have a laser in the manner of Pinkel et al. to provide a more flexible system and enable multi-modal viewing of the sample.

Response to Arguments

7. Applicant's arguments with respect to claim 17-30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (703) 305-5414. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on (703) 308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.



LAF
May 15, 2003


MARK A. ROBINSON
PRIMARY EXAMINER